

CLAIMS

1. An appliance for cooking food under pressure, the appliance comprising at least:

5 • a vessel (1) and a lid (2) for being fitted to and locked on said vessel (1) in order to form a leaktight cooking enclosure;

10 • one or more jaws (4) mounted to move in translation by corresponding drive means (5) between a position in which the lid (2) is locked relative to the vessel (1), and an unlocking position; and

 • a control device (6, 7, 8) for controlling the movement of the at least one jaw (4), the control device comprising:

15 • an intermediate part (7) comprising at least one maneuvering means (7A, 7B) and at least one clutch means (7C, 19), and mounted to turn freely relative to the drive means (5) so that the maneuvering means (7A, 7B) co-operates with said drive means (5) so as to control the displacement thereof; and

20 • a main control member (6) comprising at least one transmission means (6C, 18, 30, 31), said main control member (6) being positioned relative to the intermediate part (7) so that the transmission means (6C, 18, 30, 31) co-operates with the clutch means (7C, 19) so
25 as to control turning of the intermediate part (7) when the main control member (6) is actuated,

 the appliance being characterized in that the main control member (6) is mounted to move in translation relative to the lid (2).

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2. A cooking appliance according to claim 1, characterized in that the main control member (6) is mounted to move in a direction that is substantially radial.

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3. An appliance for cooking food according to claim 1 or claim 2, characterized in that the at least one jaw (4)

is mounted to move in a direction that is substantially radial.

4. A cooking appliance according to any one of claims 1 to 3, characterized in that the main control member (6) controls rotation of the intermediate part (7) in a manner that is active in the locking direction and in the unlocking direction.

5. A cooking appliance according to any one of claims 1 to 4, characterized in that the clutch means is constituted by a pinion (19) mounted to be axially stationary on the intermediate part (7).

6. A cooking appliance according to claim 5, characterized in that the transmission means is constituted by a rack (18) arranged on the main control member (6) to mesh laterally with the pinion (19).

7. A cooking appliance according to claim 5, characterized in that the transmission means is constituted by a worm screw (31) mounted stationary on the main control member (6) and extending in the translation direction thereof, together with a gearwheel (30) mounted stationary relative to the lid (2) and meshing perpendicularly with the pinion (19), said gearwheel (30) having a central tapped hole co-operating with the worm screw (31) so that movement in translation thereof causes the gearwheel (30) to move in rotation.

8. A cooking appliance according to any one of claims 1 to 4, characterized in that the clutch means is constituted by a guide peg (7C) extending axially from the intermediate part (7).

9. A cooking appliance according to claim 8, characterized in that the transmission means include at

least one plane surface (32) extending obliquely relative to the radial direction, and arranged in such a manner that movement in translation of the main control member (6) causes the guide peg (7C) to be engaged by the plane surface (32), which pushes against the guide peg (7C), thereby causing the intermediate part (7) to turn.

10. A cooking appliance according to claim 8, characterized in that the transmission means is constituted by an oblong drive orifice (6C) extending obliquely relative to the radial direction and co-operating with the guide peg (7C) in such a manner that a movement in translation of the control member (6) leads to a movement in rotation of the intermediate part (7).

11. A cooking appliance according to any one of claims 1 to 10, characterized in that the intermediate part (7) is mounted to turn resiliently relative to the lid (2) in such a manner that its resilient return position corresponds to at least one jaw (4, 4') being locked.

12. A cooking appliance according to claim 11, characterized in that the intermediate part (7) is mounted to turn resiliently against a compression spring (33).

13. A cooking appliance according to any one of claims 1 to 12, characterized in that the drive means (5) includes at least one drive arm (5A, 5B) guided to move in translation relative to the lid (2), and presenting an outer end (24, 25) connected to the at least one respective jaw (4, 4') and an inner end (22, 23) for co-operating with the maneuvering means (7A, 7B).

14. A cooking appliance according to claim 13, characterized in that the inner end (22, 23) is provided with an axial guide stud (12A, 12B).

15. A cooking appliance according to claim 14,
characterized in that the maneuvering means (7A, 7B)
comprises at least one ramp-forming surface (34, 35)
5 extending obliquely relative to the radial direction, and
arranged in such a manner that when the intermediate part
(7) turns, the ramp-forming surface (34, 35) engages the
corresponding axial guide stud (12A, 12B) and pushes it,
thereby causing the drive means (5A, 5B) to move.
- 10 16. A cooking appliance according to claim 14,
characterized in that the maneuvering means (7A, 7B)
comprise at least one oblong maneuvering slot (7A, 7B)
arranged in the thickness of the intermediate part (7) to
15 engage the corresponding axial guide stud (12A, 12B) in
such a manner that turning the intermediate part (7)
causes the drive means (5A, 5B) to move.
17. A cooking appliance according to claim 16,
20 characterized in that the intermediate part (7) is a
control-wheel-forming plate having as many lugs (36, 37)
as there are jaws (4, 4'), and in which the oblong
maneuvering slots (7A, 7B) are formed.
- 25 18. A cooking appliance according to any one of claims 1
to 14, characterized in that the maneuvering means (7A,
7B) comprise a link having one of its ends connected to
the drive means (5) and having its other end connected to
the intermediate part (7).
- 30 19. A cooking appliance according to any one of claims 1
to 18, characterized in that the drive means (5) is
mounted to slide resiliently relative to the lid (2) in
such a manner that its resilient return position
35 corresponds to the at least one jaw (4, 4') being locked.

20. A cooking appliance according to any one of claims 1 to 19, characterized in that the main control member (6) is dynamically coupled with a secondary control member (8) mounted to move on the lid in a substantially axial direction, said secondary control member (8) being suitable for causing the drive means (5A, 5B) to move in the locking direction.

21. A cooking appliance according to claim 20, characterized in that the device (6, 7, 8) for controlling movement of the jaws includes reversible blocking means (9, 9', 9'') for locking the drive means (5A, 5B) in the unlocking position, the secondary control member (8) including release means (8A) for causing the reversible blocking means (9, 9', 9'') to be released.

22. A cooking appliance according to claim 16 or claim 17, and claim 21, characterized in that the oblong maneuvering slots (7A, 7B) are shaped so that each of the presents a bend (38, 39) which forms the reversible blocking means (9, 9').

23. A cooking appliance according to any one of claims 1 to 22, characterized in that it includes closure/opening safety means (10) of position that is sensitive to the pressure or the temperature that exists inside the cooking enclosure, said safety means (10) being mounted to move between two stable abutment positions, a low abutment position in which said safety means puts the inside of the enclosure into communication with the outside below a predetermined internal pressure P_0 , and a high position in which it closes off communication between the enclosure and the outside when the pressure P_0 is reached, so as to allow the pressure inside the appliance to rise for cooking purposes.

24. A cooking appliance according to claim 23, characterized in that the closure/opening safety means (10) is a pressure-measuring rod.

5 25. A cooking appliance according to claim 23 or claim 24, characterized in that the intermediate part (7) is shaped in such a manner as to co-operate with the safety means so that the safety means prevent the intermediate part (7) from turning freely, and thus prevents the lid
10 (2) from unlocking so long as the safety means is in the high position, said intermediate part (7) also being shaped so as to prevent the safety means (10) from reaching the high position so long as the intermediate part (7) is in a position other than that corresponding
15 to the lid (2) being locked.

26. A cooking appliance according to any one of claims 1 to 25, characterized in that the main control member (6) is an opening pusher suitable for being controlled by
20 hand.

27. A cooking appliance according to any one of claims 1 to 26, characterized in that the secondary control member (8) is a closure pusher suitable for being controlled by
25 hand.

28. A cooking appliance according to claims 2 and 19, characterized in that the lid (2) presents an inside face (2A) facing towards the inside of the cooking enclosure
30 and an opposite, outside face (2B) having mounted thereon a mechanism plate (13) provided with:

• a vertical assembly pin (14) about which the control-wheel-forming plate (7) is mounted to turn freely, the oblong maneuvering slots (7A, 7B) thereof co-
35 operating with respective corresponding rectilinear oblong slots (13A, 13B) formed radially in the mechanism

plate (13) to define two engagement openings (15, 16) for each of said guide studs (12A, 12B), respectively; and

• the opening pusher (6);

5 arranged in such a manner that radial displacement of the opening pusher (6) leads to turning of the control-wheel-forming plate (7), where such turning causes the engagement openings (15, 16) to move radially, thereby entraining the guide studs (12A, 12B), and thus the arms (5A, 5B) and the jaws (4, 4') to the unlocking position.

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29. A cooking appliance according to claim 28, characterized in that the mechanism plate (13) is suitable for being fitted and releasably secured to the lid (2).

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